

Observations of oxycodone coprescriptions and nonreported prescription medications in a population of those with chronic pain

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Purpose

Oxycodone is a potent opiate analgesic and important clinical tool. However, the rates of abuse and deaths related to oxycodone have increased and are reason for concern. In a study of oxycodone-related deaths, 97% of the abuse-related cases referred to multiple drugs as the cause of death. Commonly coingested drugs included alcohol, benzodiazepines, other narcotics, and antidepressants. Monitoring and understanding the relationships of medication use is fundamental to assure oxycodone is used safely and to prevent potentially hazardous drug-drug interactions. The objective of this study is to understand the relationship between oxycodone prescriptions, concomitant prescriptions, nonprescribed medication use, and adherence.

Method

The retrospective data analyses was based on the testing of 290,627 de-identified urine specimens collected between November 2009 and September 2010 and tested at Millennium Laboratories by LC-MS/MS using methods previously described. Some of the contributing patients donated multiple specimens in this time period. Two studies were performed. The first study analyzed specimens with reported oxycodone prescriptions (41% of specimens) and the prevalence of reported comedications, detection of prescribed comedications, and the incidence of nonreported prescription medications detected. The second study examined the medication pattern of those specimens positive for nonreported oxycodone (3% of specimens). These two analyses were then compared to the incidence of reported and detected medications for the entire cohort of 290,627 specimens. Considering that oxymorphone is a metabolite of oxycodone, opiates were analyzed in two groups: other opiates¹ (with oxymorphone) and other opiates² (without oxymorphone).

Results

Commonly reported coprescriptions among patients prescribed oxycodone were benzodiazepines (31.7%), other opiates (26.6%), and carisoprodol (12.6%). The nonreported prescription medications detected most often were other opiates and benzodiazepines. For the group of specimens where nonreported oxycodone was detected, it was similarly observed that benzodiazepines (30.5%), other opiates (62.3%), and carisoprodol (11%) were the most common reported concomitant prescriptions. The incidence of positive results for benzodiazepines and carisoprodol were similar in the two groups; however, a greater occurrence of other opiates (62.3% vs 26.6%) was reported as prescribed in the nonreported oxycodone detected group. As with the reported oxycodone prescription group, the incidence of nonreported other opiates¹ (with oxymorphone) was much higher than the other opiates² (without oxymorphone), possibly explained by the metabolism of oxycodone to oxymorphone. Compared to the entire population, both groups had a higher incidence of detected nonreported opiates and benzodiazepines. The prevalence of detected nonreported benzodiazepines identified for the entire population is 15%; it is 17.1% for specimens with reported oxycodone prescriptions, and 22% among the nonreported prescription oxycodone group. The nonreported other opiates detected percentage represents the part of the population where an opiate was found and no opiates were reported as prescriptions. For all specimens, the observed rate of nonreported opiate detection is 3.3%. This value was higher for the prescribed oxycodone group (13.2%) than the nonprescription oxycodone group (9.9%). For all medications or medication classes, there were undetected reported medications.

Conclusions

The results suggest that adherence to oxycodone is not an indicator of adherence to other medications. However, there is an association of a higher percentage of nonreported other opiates and benzodiazepines with oxycodone use, reported or unreported, compared to the entire population. The results demonstrate that patients supplementing their medication regimen with nonprescribed oxycodone are more likely to take other nonreported medications than their prescribed oxycodone counterparts. This information may help physicians make clinical decisions about monitoring adherence, identifying nonprescription drug use, minimizing drug-drug interactions and adverse drug events, and initiating conversations with patients about safety and concurrent conditions.